

1. A method for dynamically generating a printer model database through print job analysis, the method comprising:

using a printer model database generation application to dynamically generate a base sequence test print job;

5           using a printer model database generation post-spooling process to capture the test print job;

exchanging test sequence information between the printer model database generation application and the printer model database generation post-spooling process, wherein the test sequence information is associated with the test print job;

10           archiving the test print job; and

using the printer model database generation application to perform an analysis process to generate a printer model database entry.

2. The method as recited in claim 1, wherein the step for using a printer model database generation application to dynamically generate a base sequence test print job comprises automatically generating the test print job when the test print job corresponds to an option that is printer driver independent.

3. The method as recited in claim 2, wherein the step for automatically generating the test print job when the test print job corresponds to an option that is printer driver independent comprises at least one of the steps for:

- (i) specifying one or more device independent print options
- (ii) specifying one or more device independent option settings.

4. The method as recited in claim 2, wherein the option corresponds to at least one of:

- (i) a number of copies to be rendered;
- (ii) a copy collation process;
- 5 (iii) a duplex printing process;
- (iv) an order for rendering pages of the print job;
- (v) an orientation for rendering a page of the print job;
- (vi) a size of paper to be used to render the print job;
- (vii) a paper source to be used to render the print job;
- 10 (viii) a paper type to be used to render the print job;
- (ix) a booklet rendering process; and
- (x) an N-up printing process.

5. A method as recited in claim 2, further comprising:  
15 obtaining a default initialized structure from a printer driver;  
updating the structure according to the option; and  
generating the print job using the updated structure.

6. The method as recited in claim 1, wherein the step for using a printer model database generation application to dynamically generate a base sequence test print job comprises semi-automatically generating the test print job when the test print job corresponds to at least one of:

- 5                   (i) an option that is printer driver dependent; and  
                     (ii) an option setting that is printer driver dependent.

7. A method as recited in claim 6, wherein the step for semi-automatically generating the test print job comprises a step for using the printer model database generation application to initiate user interaction.

8. A method as recited in claim 7, wherein the step for semi-automatically generating the test print job further comprises steps for:

15 receiving user input relating to at least one of (i) the option and (ii) the option setting;  
cataloging at least one of (i) the option and (ii) the option setting; and  
electronically constructing the test print job.

9. A method as recited in claim 8, wherein the step for electronically constructing the test print job comprises the steps for:

displaying any standard options and printer driver independent settings;  
obtaining from the user any input relating to additional settings; and  
initiating the print job.

10. A method as recited in claim 8, wherein the step for electronically constructing the test print job comprises the steps for:

prompting the user for any proprietary options; and

obtaining from the user any input relating to the proprietary options.

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11. A method as recited in claim 1, wherein the step for using a printer model generation post-spooling process to capture the test print job is performed by at least one of:

- (i) a print processor;
- (ii) a print spooler;
- 10 (iii) a port monitor;
- (iv) a print assist; and
- (v) a print server.

12. A system configured to dynamically generating a printer model database through print job analysis, the system comprising:

a computer device comprising:

a processing system;

5 a print subsystem;

a printer model database generation application configured to dynamically generate a base sequence test print job and to perform an analysis process to generate a printer model database entry; and

10 a printer model database generation post-spooling process configured to capture the test print job; and

a printer device configured to render a print job; and

a communication mechanism coupled to the computer device and to the printer device.

15 13. The system method as recited in claim 12, wherein the print subsystem comprises at least one of:

(i) a printer driver;

(ii) a print assist;

(iii) a spooler; and

20 (iv) a print processor.

14. The system as recited in claim 13, wherein the printer model database generation application is configured to automatically generate the test print job when the test print job corresponds to a printer driver independent option and to semi-automatically generate the test print job when the test print job corresponds to at least one of (i) a printer  
5 driver dependent option and (ii) a printer driver dependent option setting.

15. The system as recited in claim 13, wherein the printer model generation post-spooling process is performed by at least one of:

- (i) the print processor;
- 10 (ii) the printer driver;
- (iii) the print assist;
- (iv) the spooler; and
- (v) a print server coupled to the communication mechanism, wherein the communication mechanism is a network.

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16. A computer program product for implementing within a computer system a method for dynamically generating a printer model database through print job analysis, the computer program product comprising:

a computer readable medium for providing computer program code means utilized to implement the method, wherein the computer program code means is comprised of executable code for implementing the steps for:

5 using a printer model database generation application to dynamically generate a base sequence test print job;

10 using a printer model database generation post-spooling process to capture the test print job;

15 exchanging test sequence information between the printer model database generation application and the printer model database generation post-spooling process, wherein the test sequence information is associated with the test print job;

16 archiving the test print job; and

17 using the printer model database generation application to perform an analysis process to generate a printer model database entry.

17. A computer program product as recited in claim 16, wherein the step for using  
20 a printer model database generation application to dynamically generate a base sequence test print job comprises automatically generating the test print job when the test print job corresponds to an option that is printer driver independent.

18. A method as recited in claim 17, further comprising:
- obtaining a default initialized structure from a printer driver;
- updating the structure according to the option; and
- generating the print job using the updated structure.

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19. A method as recited in claim 16, wherein the step for using a printer model database generation application to dynamically generate a base sequence test print job comprises:

using the printer model database generation application to initiate user interaction;

receiving user input relating to at least one of (i) a printer driver dependent option and (ii) a printer driver dependant option setting;

cataloging at least one of (i) the printer driver dependent option and (ii) the printer driver dependent option setting; and

15 electronically constructing the test print job.

20. A computer program product as recited in claim 16, further comprising a step  
for employing a print component to perform the step for using a printer model generation  
post-spooling process to capture the test print job, wherein the print component is one of:

- (i) a print processor;
- 5 (ii) a printer driver;
- (iii) a print assist
- (iv) a spooler; and
- (v) a print server.

10 21. A method for determining an imaging device command, the method  
comprising:

- generating a base sequence test print job;
- capturing output information for the base sequence test print job;
- generating a command specific print job wherein one option is configured  
15 differently than in the base sequence test print job;
- capturing driver output for the command specific print job; and
- comparing the driver output for the command specific print job and the output  
information for the base sequence test print job to determine the imaging device  
command for communicating the one option.

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22. A method for creating an imaging device command database, the method comprising:

generating a base sequence test imaging device job;

capturing output information for said base sequence test imaging device job;

5 generating a command specific imaging device job wherein at least one option is configured differently than in said base sequence test imaging device job;

capturing command specific driver output for said command specific imaging device job; and

10 storing at least one difference between said output information and said command specific driver output as an imaging device command in an imaging device command database.

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